

RESOURCES FOR STEM EDUCATION

Chapter Summary

Keeping Illinois competitive requires that resources be provided for STEM education. In addition to funding, other resources include staffing of the schools with qualified teachers and providing the most current instructional approaches and information to parents and students.

One of the greater challenges for Illinois is the need to increase the mathematics and science skills of all students, and this requires students in middle and junior high school to select more rigorous courses. Nationally, the role of the guidance counselor has become that of a career specialist, even in the elementary grades.

The quality of education provided is directly related to the qualifications of teachers in the classroom. Since Illinois ranks far below other states in the percentages of mathematics and science teachers who have the appropriate teaching credentials, the quality of STEM educators needs attention. Several steps have been taken. Illinois implemented the A.A.S. degree in community colleges to try to increase the number of mathematics and science teachers. Some school districts report success in their partnerships with universities to provide alternative certification programs for technically-proficient career changers. Illinois offers scholarships for students preparing to teach in areas where it is difficult to place teachers. Several states offer scholarships for students preparing for careers in STEM education and STEM professions, a mechanism supported by several of the national STEM reports.

In terms of fiscal resources, Illinois appeared average in the federal and state aggregate expenditures on education. However, the state has one of the largest gaps between student expenditures in the lowest- and the highest-poverty districts. Because of the large discrepancy among states in the amount of federal research funding, it is difficult to compare Illinois to other states. In the past few years, Illinois has received additional federal funds for R & D activities.

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